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EXAMINER

SAINT SURIN, JACQUES M

ART UNIT

PAPER NUMBER

2856

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Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

1. Applicant's election with traverse of claims 1-2, 6-7 and 11-48 in the reply filed on 11/09/05 is acknowledged. The traversal is on the ground(s) that the fluid and closed cell foam are not different species. This is not found persuasive because the fluid and closed cell foam are clearly different since both have different characteristics and clearly provide different results. In the event that applicant wants to define both as obvious over each other, such arguments should be clear in the record in the next response in order for claims 3-5 and 8-10 to be reconsidered in this applications.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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3. Claims 1-2, 11-12, 14-15, 21-25, 28-30, 34 and 40-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Potter (US Patent 6,854,330).

Regarding claims 1 and 28, Potter discloses an apparatus (accelerometer 20-1, see: col. 2, lines 54) for sensing motion of a reference surface, comprising:

a shell (housing 22), a case (chamber 24) within the shell (22), and a suspension (spring 24):

wherein the mass of the case is greater than the mass of the shell (this limitation is inherently met in the reference), and wherein the case (20) is coupled to the shell (22) with the suspension (insulating layer 48) ; and a first electrode (28) coupled to the shell (22); wherein the first electrode (28) is configured to detect relative motion (the position of the member 26(1) can be altered as a result of an acceleration, although other configurations can be used, such as having the member 26(1) being fixed and one of the pair of electrodes 28 or 30 whose position can be altered as a result as an acceleration.(see: col. 3, lines 8-12) between the first electrode (28) and the case (24).

Regarding claim 28, it is similar in scope with claim 1 and therefore, it is rejected for the reasons set forth for that claim.

Regarding claim 2, Potter discloses Potter discloses shell (22) is substantially cylindrical having an axial direction and a radial perpendicular to the axial direction.

Regarding claim 6, Potter discloses the a first insulating layer 48 such as silicon dioxide although

Regarding claim 11, Potter discloses a member 26(1) which can store a static charge, see: col. 3, line 13.

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Regarding claim 12, Potter discloses an accelerator monitoring system 38 is couple to and provides an output of the potential difference between the first and second electrodes 28 and 30, although other types of devices could be coupled to the first and second electrodes 28 and 30, see; col. 6, lines 41-43.

Regarding claim 14, potter discloses first electrode 28 that inherently includes a metal foil.

Regarding claim 15, potter discloses the chamber 24 is sealed with a fluid , se; col. 3, line 6.

Regarding claims 21-22, the fluid of Potter inherently increases a capacitance of the first electrode 28 and damps the relative motion between the case 24 and the first electrode (28).

Regarding claim 23, Potter discloses a second electrode 30 coupled to shell (22).

Regarding claim 24, Potter discloses first and second electrodes 28 and 30 disposed at a top and at a bottom of the shell. Regarding claim 25, Potter discloses the position of the member 26(1) can be altered as a result of an acceleration (col. 3, lines 8-10). Furthermore, Potter discloses electrodes 28 and 30 with respect to member 21 have a potential difference of zero at an initial state (col. 3, lines 43-46). Regarding claims 29-30, Potter discloses housing 22 which is substantially cylindrical.

Regarding claim 34, Potter discloses a fluid disposed between the shell 922)and the case (24).

Regarding claim 40-41, potter discloses a fluid which inherently increases the capacitance of the electrodes 28 and 30 and also provides the damping function

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potter (US Patent 6,854,330) in view of Trzaskos (US Patent 4,382,201).

Regarding claims 6-7, Potter does not disclose the shell comprises polyvinyl chloride and the case comprises tungsten. Trzaskos discloses a cylindrical backing 14 is a tungsten-polyvinyl chloride composite fabricated, and absorbs sound coming off the back side of the element, see: col. It would have been obvious to one having ordinary skill in the art at the time of the invention to utilize in Potter the backing material of Trzaskos because it has a high level of acoustic attenuation in the backing

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wherein almost all of the acoustic energy emitted from the back of the transducer element is absorbed, and there is a negligible amount of energy reflected back to the element. Therefore, the above combination would provide a reliable backing since the resultant noise coming from the backing is less than generated background noise.

7. Claims 16-20 and 35-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potter (US Patent 6,854,330) in view of Rike (US Patent 2,776,010).

Regarding claims 16-20 and 35-39, Potter does not disclose the viscosity of the fluid and the fluid is ethylene glycol. Rike discloses the liquid hydrocarbon having a viscosity of less than 40 centipoises (see; col. 2, lines 35-37). Rike further discloses the salvation agent may suitably be an ethylene glycol, see: col. 2, lines 31-32. It would have been obvious to one of the ordinary skill in the art to utilize in Potter the fluid of Rike because it would provide effectively the damping function in an efficient manner.

8. Claims 13, 31-33 and 42- 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potter (US Patent 6,854,330) in view of Greer, Jr. (US Patent 4,764,908).

Regarding claim 13, Potter does not disclose a charge amplifier. Greer discloses amplifier 32. It would have been obvious to one having ordinary skill in the art at the time of the invention to utilize in Potter the amplifier of Greer because it would amplify the detected signals before being transmitted to the antenna in order to have a better signal.

Regarding claims 31-33, Potter does not disclose a cone shaped end. Greer discloses geophone 10 having housing 16 is formed from a generally conical bottom 20,

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see: col. 6, lines 25-27. Greer further discloses fluid 40 which provides the damping function and battery 32A, see: Fig. 4. It would have been obvious to one having ordinary skill in the art at the time of the invention to employ in Potter the housing of Greer because the conical end would be very effective to the geophone to be able to collect information below the reference surface so as to perform reliable inspection.

Regarding claims 42-43, Potter does not disclose a n orifice ring. Greer discloses with reference to Figs. 5 and 7, means are provided for circulating fluid within the ring shaped conduit 34. Circulation is necessary to enhance the usefulness of the magnetohydrodynamic by providing a fluid current velocity, see: col. 7, lines 7-10. It would have been obvious to one having ordinary skill in the art at the time of the invention to employ in Potter the ring of Greer because one of the ordinary skill in the art would be motivated to recognize the advantages of utilizing the orifice ring of Greer for controlling the flow of the fluid in an efficient manner.

Regarding claim 44, Potter does not disclose a radio coupled to the shell. Greer discloses seismological vibrations detected by sensor 30 are amplified and processed by a circuit 32 for transmittal to a remote location through a conventional antenna 34 which may be employed in conjunction with land based UHF or VHF radio monitoring, see: col. 6, lines 34-43. It would have been obvious to one having ordinary skill in the art at the time of the invention to utilize in potter the radio of Greer because the obtained informations would be able to be transmitted immediately for making necessary decisions.

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Allowable Subject Matter

9. Claims 47-49 are allowable over the prior art of record.
10. Claims 26-27 and 45-46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacques M. Saint-Surin whose telephone number is (571) 272-2206. The examiner can normally be reached on Mondays through Fridays 10:30 A.M. -7:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272 2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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February 04, 2006



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